

CLPD Programming

There is a set-up for programming and testing CPLDs, muxes, and stretchers on the second level of the north side of the dance floor, by the GOPHER room. Computer does not have network access.

Click on shielddaq user. Normal password.

1. Power off mux. Carefully take the CLPDs that you want to program out of the muxes. Make sure you are grounded when you do this. Static can ruin the cards.
2. Select CPLD you'd like to re-program and insert into 'Veto Gas Mixer Control Board' located on desk, wearing a static strip. Ensure that the Xilinx label is facing upwards, and that the small circular indentation on the back of the chip lines up with the arrow in the chip slot.
3. Turn voltage supply on to 12V, and then power board.
4. Open program on computer called iMPACT.
5. Open project MASTER_TRIG.ipf, or most recent one.
6. Make sure board is hooked up to computer.
7. Right click anywhere and select initialize chain. You should see just a single chip appear on the screen.
8. Indicate that yes, you'd like to assign configuration files.
9. Select Master_Trigger.jed for the central chip, or go up one folder and select MUX_1_4.jed in the MUX_1_4 folder for the left chip, and MUX_5_8.jed in the MUX_5_8.jed for the right chip.
10. Another window pops up, and select ok.
11. Right click, and select 'Program'
12. Right click, and select 'Verify'
13. If the verification succeeds, turn off the voltage and carefully remove chip from board.

If further testing is required/wanted, feel free to test the chips by assuring that the stretcher/muxes still work correctly. For that testing documentation, see the UMN wiki.